

## CLAIMS

What is claimed is:

1. A method for recovering DNA, RNA or proteins from a formalin-fixed paraffin-embedded biological tissue sample comprising:

5 deparaffinizing the sample;  
heating the sample in a chaotropic solution comprising an effective concentration of a guanidinium compound to a temperature in the range of about 50 to about 100 °C for a time period of about 5 to about 120 minutes; and  
recovering said RNA, DNA or protein from said chaotropic solution.

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2. The method of Claim 1 further comprising rehydrating the deparaffinized sample before heating.

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3. The method of Claim 2 further comprising homogenizing said sample before heating.

4. The method of Claim 3 for recovering RNA from a biological tissue  
20 sample wherein said RNA is recovered by extraction from said chaotropic solution with a water insoluble organic solvent.

5. The method of Claim 4 wherein said water insoluble organic solvent  
25 comprises chloroform.

6. The method of Claim 5 further comprising purifying said RNA.

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7. The method of Claim 6 wherein said RNA is purified by ethanol precipitation.

8. The method of Claim 1 for recovering RNA wherein said time period is  
5 from about 10 to about 60 minutes.

9. The method of Claim 8 wherein said time period is from about 30 to about  
60 minutes.

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10. The method of Claim 1 for recovering RNA wherein said guanidinium compound is guanidinium hydrochloride.

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11. The method of Claim 1 for recovering RNA wherein said guanidinium compound is guanidinium isothiocyanate.

20 12. The method of Claim 11 wherein the concentration of said guanidinium isothiocyanate in the chaotropic solution is about 2 to about 5M.

25 13. The method of Claim 11 wherein said chaotropic solution has a pH of about 3-6.

14. The method of Claim 1 for recovering RNA wherein said chaotropic solution further comprises a reducing agent.

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15. The method of Claim 14 wherein said reducing agent is  $\beta$ -mercaptoethanol.

5 16. The method of Claim 14 wherein said reducing agent is dithiothreitol.

17. The method of Claim 1 wherein said RNA is used to determine the level of expression of a gene.

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